

## NASA Weekly Update

Week of July 10 - 17, 2006

### 7-17: Space Shuttle Discovery Lands in Florida:

The STS-121 astronauts returned home today from a successful mission to the International Space Station when Space Shuttle Discovery touched down at Kennedy Space Center, Fla. Landing occurred at 9:14 a.m. EDT. Discovery gave the United States a birthday



Space Shuttle Discovery lands at Kennedy Space Center, Fla.

present when it launched July 4. STS-121 spent just under 13 days in orbit, with almost nine days at the station. Discovery delivered supplies, equipment and a new Expedition 13 crew member to the orbital outpost. During three spacewalks, the STS-121 crew members performed maintenance on the station's mobile transporter and tested orbiter heat shield repair techniques. They also conducted joint operations with the Expedition 13 crew. STS-121 was the 115th shuttle mission and the 18th to visit the space station. Also, landing marked the end of Discovery's 32nd flight. For more information about information about the mission, visit: <http://www.nasa.gov/shuttle>.

**7-14: NASA Marks 30<sup>th</sup> Anniversary of Mars Viking Mission:** Thirty years after the first successful landing on Mars by NASA's Viking spacecraft, the ambitious mission continues to evoke pride and enthusiasm for future space exploration. NASA's Viking 1 and 2

missions to Mars, each consisting of an orbiter and a lander, became the first space probes to obtain high resolution images of the Martian surface, characterize the structure and composition of the atmosphere and surface, and conduct on-the-spot biological tests for life on another planet. Viking 1 was launched August 20, 1975, and arrived at Mars June 19, 1976. On July 20, 1976, the Viking 1 lander separated from the orbiter and touched down at Chryse Planitia. Viking 2 was launched September 9, 1975, and entered Mars orbit August 7, 1976. The Viking 2 lander touched down at Utopia Planitia September 3, 1976. Scientists from across NASA served on the Viking science teams. For more information, visit: <http://www.nasa.gov/viking>.

### 7-13: NASA Explains Puzzling Impact of Polluted

**Skies on Climate:** NASA scientists have determined the formation of clouds is affected by the lightness or darkness of air pollution particles. This also impacts Earth's climate. In a breakthrough study published Thursday in the online edition of Science, scientists explain why aerosols -- tiny particles suspended in air pollution and smoke -- sometimes stop clouds from forming and in other cases increase cloud cover. Clouds deliver water around the globe, and they also help regulate how much of the sun's warmth the planet holds. The capacity of air pollution to absorb energy from the sun is the key. For more information, visit: [http://www.nasa.gov/vision/earth/environment/pollution\\_clouds.html](http://www.nasa.gov/vision/earth/environment/pollution_clouds.html).

### 7-13: NASA Helps Visually Impaired Students

**Rocket on:** Twelve visually impaired or blind high school students will have the opportunity to explore careers in rocketry as part of a partnership between NASA and the National Federation of the Blind. The students are participating in a weeklong rocket science camp, July 14-22, at the federation's Jernigan Institute in Baltimore and NASA's Wallops Flight Facility, Wallops Island, Va. Developed by NASA's Learning Technologies Program at the agency's Johnson Space Center in Houston, the free MathTrax computer application may be downloaded at: <http://prime.jsc.nasa.gov/mathtrax/bviDownload.htm>.

### 7-11: President Bush Calls the International Space

**Station:** President George W. Bush offered his best wishes to the crews of NASA's Space Shuttle Discovery and International Space Station Tuesday. In a private phone call from the White House at 10:35 a.m. EDT, the president told the astronauts that they represent the best of service and exploration, and he thanked them for the job they are doing.

## Weekly Status Reports



### Space Shuttle

#### Atlantis (OV-104)

Mission: STS-115 - 19th International Space Station Flight (12A) - P3/P4 Solar Arrays

Vehicle: Atlantis (OV-104)

Location: Orbiter Processing Facility Bay 1

Launch Date: No earlier than Aug. 28, 2006

Launch Pad: 39B

Crew: Jett, Ferguson, Tanner, Burbank, MacLean and Stefanyshyn-Piper

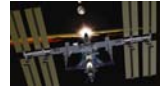
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

In Orbiter Processing Facility bay 1, workers are busy preparing Atlantis for rollover to the Vehicle Assembly Building, currently scheduled for the last week of July. Final gap filler and tile work is under way. The payload bay doors are closed for flight. The orbiter main engine and maneuvering systems are configured for rollover. Close-out work in the forward section of the orbiter continues. On Monday, Atlantis will be powered down for rollover. In high bay 3 of the Vehicle Assembly Building, close-out work is under way to mate the solid rocket boosters to ET-118, the external fuel tank for STS-115.

#### Endeavour (OV-105)

Powered-up system testing continues on Endeavour in Orbiter Processing Facility bay 2 following an extensive modification period. Functional testing of the atmosphere revitalization pressure control system is under way. This system maintains crew module

pressure during flight. Tile processing work continues around the external tank doors and nose landing gear doors. Gap filler removal and replacement continues in the high priority areas of the orbiter's heat shield. Helium system leak and functional tests of the main propulsion system are under way. Workers are installing the star trackers in Endeavour's payload bay; these are deployed during flight for guidance and navigation. All reinforced carbon-carbon panels have been installed on both wing leading edges.



### International Space Station (ISS)

Expedition 13 Commander Pavel Vinogradov and Flight Engineers Jeff Williams and Thomas Reiter said farewell to their guests, the STS-121 crew, before Space Shuttle Discovery undocked from the International Space Station at 6:08 a.m. EDT Saturday. The two crews spent almost nine days conducting joint operations.

Discovery delivered supplies, equipment and a new station crew member. European Space Agency astronaut Thomas Reiter joined the Expedition 13 crew shortly after STS-121 arrived. Most of the cargo delivered to the station arrived in the Leonardo multi-purpose logistics module. The STS-121 crew also performed maintenance on the station's mobile transporter during two of the three spacewalks.

STS-121 was the 18th shuttle mission to visit the station. The next shuttle mission scheduled to visit the orbital outpost is STS-115, which will resume assembly of the station with the delivery of the P3/P4 truss and a set of solar arrays. For more information, visit: [www.nasa.gov/station](http://www.nasa.gov/station).



### Upcoming Events

- July 17: Space Shuttle Discovery returns to Earth
- July 20: Mars Viking Anniversary Event in the Rayburn Foyer
- NET Aug 1: STEREO launch
- NET Aug 28: Space Shuttle Atlantis STS-115 mission

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